

## CLAIMS

2. The method of claim 1 further including the step of transmitting a fourth data packet, the fourth data packet having a compressed header whose differences are based upon the first signals' full header.

1           3.    A method for receiving and interpreting data  
2    packets, comprising receiving a first data packet having  
3    a full header;  
4            receiving a second data packet having a compressed  
5    header whose differences are based upon the full header  
6    of the first packet; and  
7            receiving a third data packet having a compressed  
8    header, which compressed header is based upon differences  
9    with the full header of the first data packet.

1           4.    The method of claim 3, further including the  
2    step of receiving a fourth data packet having a  
3    compressed header based upon the full header of the first  
4    data packet.

1           5.    The method of claim 3, further comprising the  
2    step of receiving a data packet with errors, and upon  
3    determining that the data packet has errors, discarding  
4    the data packet.

1           6.    A system for transmitting data packets,  
2    comprising:  
3           a memory for storing computer instructions that  
4    define compression logic, which compression logic causes  
5    compressed data packets to be formed with differences  
6    that are measured against a full and uncompressed data  
7    packet; and  
8           a processor coupled to receive and execute the  
9    computer instructions stored within the memory to cause  
10   the system to operate in a manner defined by the logic of  
11   the computer instructions.

1           7.    The system of claim 6, further including an  
2    internal bus coupled to the memory and to the processor  
3    to enable the processor to receive the computer  
4    instructions from the memory.

1           8.    The system of claim 6 further including  
2    transceiver circuitry for transmitting data packets over  
3    a wireless interface.

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1           9.    A system for receiving compressed data packets,  
2    comprising transceiver circuitry for receiving the data  
3    packets, which data packets are transmitted over an air  
4    interface;

5           processing circuitry for reconstructing the data  
6    packets that are received in a compressed format, which  
7    compressed format includes packet header information  
8    whose differences are based upon a specified full and  
9    uncompressed packet header; and

10          audio processing circuitry for converting  
11   communication signals to sound signals to communication  
12   signals.

1           10.   The receiver of claim 9, further including  
2   logic circuitry for determining whether a packet was  
3   received in a compressed or uncompressed format.

1           11.   The receiver of claim 10, wherein the logic  
2   circuitry is formed to reconstruct a packet header based  
3   upon defined differences specified within the compressed  
4   header and a specified full header wherein the specified  
5   full header is used as a basis for each of a plurality of  
6   subsequently transmitted packets having compressed  
7   headers.

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1           12. A plurality of communication signals,  
 2     comprising a first communication signal transmitted in an  
 3     uncompressed format having a full header;  
 4           a second communication signal having a compressed  
 5     header, which compressed header specifies differences  
 6     between its header in an uncompressed format and the full  
 7     header of the first data packet; and  
 8           a third communication signal having a compressed  
 9     header, which compressed header specifies differences  
 10    between a full header for the third communication signal  
 11    and the full header of the first communication signal.

1           13. The communication signals of claim 12, wherein  
 2     the second and third communication signals further  
 3     include uncompressed header information for those  
 4     portions of a header that could not be compressed and for  
 5     which differences with the full header of the first  
 6     communication signal could not be specified.

1           14. The communication signals of claim 13, further  
 2     comprising a byte for specifying whether the  
 3     communication signal has a compressed or uncompressed  
 4     header.

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1        15. The communication signal of claim 13, further  
2 comprising at least one byte for identifying the Internet  
3 protocol version format that defines the signal layout.